

Final Project Grammar

$$S_0 \rightarrow sS_1 \mid iS_2 \mid xS_3$$

$$S_1 \rightarrow iS_2 \mid xS_3$$

$$S_2 \rightarrow iS_2 \mid xS_3$$

$$S_3 \rightarrow \wedge S_4$$

$$S_4 \rightarrow 2S_5$$

$$S_5 \rightarrow sS_6$$

$$S_6 \rightarrow sS_7 \mid iS_8 \mid xS_9 \mid \varepsilon$$

$$S_7 \rightarrow iS_8 \mid xS_9$$

$$S_8 \rightarrow iS_8 \mid xS_9$$

$$S_9 \rightarrow sS_{12} \mid \wedge S_2$$

$$S_{10} \rightarrow 1S_{11}$$

$$S_{11} \rightarrow sS_{12} \mid \varepsilon$$

$$S_{12} \rightarrow iS_{13}$$

$$S_{13} \rightarrow iS_{13} \mid \varepsilon$$

$$i \rightarrow 0 \mid 1 \mid 2 \mid 3 \mid 4 \mid 5 \mid 6 \mid 7 \mid 8 \mid 9$$

$$s \rightarrow + \mid -$$

$$x \rightarrow "x"$$

$$\wedge \rightarrow " \wedge "$$